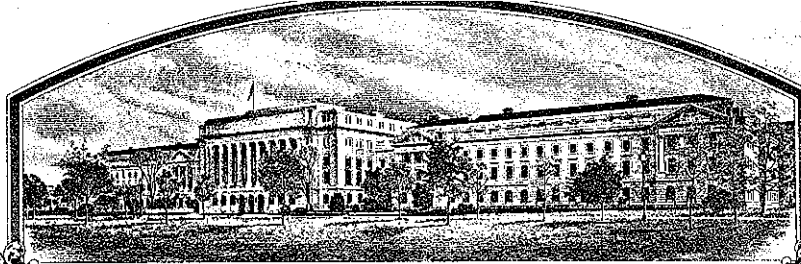


No.

7800064



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Asgrow Seed Company

Whereas, THERE HAS BEEN PRESENTED TO THE
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

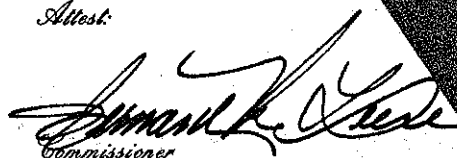
NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *seventeen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (U.S.C. 542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

ONION

'Excel G'

In Testimony Whereof, I have hereunto set
my hand and caused the seal of the Plant
Variety Protection Office to be affixed
at the City of Washington
this 21st day of December in
the year of our Lord one thousand nine
hundred and seventy-eight

Attest:


Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service


Secretary of Agriculture



UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION

FORM APPROVED
OMB NO. 40-R3822

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1a. TEMPORARY DESIGNATION OF VARIETY XP462		1b. VARIETY NAME Excel G		FOR OFFICIAL USE ONLY	
2. KIND NAME Onion		3. GENUS AND SPECIES NAME Allium cepa		PV NUMBER 7800064	
4. FAMILY NAME (BOTANICAL) Amaryllidaceae		5. DATE OF DETERMINATION May 1970		FILING DATE 5-8-78	
6. NAME OF APPLICANT(S) Asgrow Seed Company		7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) Kalamazoo, Michigan 49001		TIME 2:30 P.M.	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Corporation		10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION Delaware		DATE 5-8-78	
12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS: John A. Batcha; Asgrow Seed Company; Unit 9630-190-1; Kalamazoo, MI 49001.		8. TELEPHONE AREA CODE AND NUMBER (616) 385-6605		11. DATE OF INCORPORATION March 22, 1968	

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- ☒ 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- ☒ 13B. Exhibit B, Novelty Statement.
- ☒ 13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)
- ☐ 13D. Exhibit D, Additional Description of the Variety.

14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a). (If "Yes," answer 14B and 14C below.) ☐ YES ☒ NO

14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? ☐ YES ☐ NO

14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? ☐ YES ☒ NO (If "Yes," give name of countries and dates.)

15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES? ☐ YES ☐ NO (If "Yes," give name of countries and dates.)

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL? ☒ YES ☐ NO

17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

April 19, 1978
(DATE)

John A. Batcha
(SIGNATURE OF APPLICANT)

(DATE)

(SIGNATURE OF APPLICANT)

INSTRUCTIONS

GENERAL: Send an original copy of the application and exhibits, at least 2,500 viable seeds, and \$500 fee (\$250 filing fee and \$250 examination fee) to U.S. Dept. of Agriculture, Agricultural Marketing Service, Livestock, Poultry, Grain and Seed Division, Plant Variety Protection Office, National Agricultural Library Building, Beltsville, Maryland 20705. (See section 180.175 of the Regulations and Rules of Practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

ITEM

- 5 Give the date the applicant determined that he had a new variety based on (1) the definition in section 41(a) of the Act and (2) the date a decision was made to increase the seed.
- 13a Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4) evidence of uniformity and stability.
- 13b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties: (1) identify these varieties and state all differences objectively; (2) attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.
- 13c Fill in the Exhibit C, Objective Description form, for all characteristics for which you have adequate data.
- 13d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe, such as, plant habit, plant color, disease resistance, etc.
- 14a If "YES" is specified (seed of this variety be sold by variety name only as a class of certified seed) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled, his decision published, or the certificate has been issued. However, if the applicant specified "NO," he may change his choice. (See section 180.16 of the Regulations and Rules of Practice.)
- 15a See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.

EXHIBIT A

Origin and Breeding History of the Variety

1961 Excel x Stockton G-36 and reciprocal
1962 Bulb selection-Milpitas, California
1963 Self
1964 Bulb selection-Milpitas, California
1965 Self PC65462 @
1966 Bulb selection-Milpitas, California (PC664056)
1967 Self PC671087-3 @
1968 Bulb selection-Texas (SD68825)
1969 Increase PC69113
1970 Bulb mass selection-Texas
1971 Increase
1972 Bulb crop
1973 Increase
1974 In house trials-Texas
1975-1977 Trials

No variants noted in increases after 1970 mass selection. Freedom from variants and true type expression in production after 1970. Mass selection indicates high stability for type.

See letter 30 June 1978 appended.

April 19, 1978



Asgrow Seed Company
subsidiary of The Upjohn Company

7800064

Kalamazoo, Michigan 49001

30 June 1978

Mr. H. H. Fisher, Examiner
Plant Variety Protection Office
U.S. Department of Agriculture
National Agricultural Library Building
Beltsville, MD 20705

Dear Mr. Fisher:

You are authorized to amend application 7800064 for Excel G as follows:

DELETE FROM EXHIBIT A: No variants noted in increases after 1970 mass selection. Freedom from variants and true type expression in production after 1970. Mass selection indicates high stability for type.

ADD TO EXHIBIT A: Excel G is uniform and stable. Uniformity was established in 1970 trials when no variants were found. Stability has been established in trials and increases since 1970 where Excel G has been found uniform with variants within commercially acceptable limits.

The above change should clarify this matter. Please contact me should you have any further questions.

Very truly yours,

John A. Batcha, Manager
Inventory and Distribution

JAB/ghs

To our knowledge, the variety which most closely resembles Excel G, is Excel. The characteristics which make Excel G different from Excel include but are not restricted to the following:

1. Excel G is later in maturity as evidenced by the following percentage of tops down on the same date:

	<u>5/7/74</u>	<u>5/4/77</u>	<u>3/23/78</u>
Excel G	30%	5%	0
Excel	50	10	Few

2. Excel G has heavier bulbs as evidenced by the following mean weight per bulb for 20 bulb samples:

Mean weight per bulb 20 bulb samples

	<u>Excel G</u>	<u>Excel</u>
	217 gm	83 gm
	142	119
	106	65
	<u>44</u>	<u>52</u>
Mean	127	80

3. Excel G has a deeper bulb shape as evidenced by the following index per bulb for 5 bulb samples:

	<u>Shape Index (Height/Diameter)</u>	
Excel G	Excel	Excel
.65		.59
.62		.59
.62		.59
.61		.54
.59		.59
.60		.60
.61		.58
.62		.58
Mean	.62	.58

4. Excel G has better storage capability as evidenced by the % loss, May to September (except 1977 which is to July):

	<u>Excel G</u>	<u>Excel</u>
1974	30%	31%
1975	26	39
1977	2	11

5. Excel G has a thicker neck when undercut for early harvest than Excel as evidenced by the following individual bulb neck diameter measurements in mm made in 1978.

	<u>Excel G</u>	<u>Excel</u>
	23	22
	28	20
	27	24
	29	22
	29	22
	<u>27</u>	<u>23</u>
Mean	27	22

OBJECTIVE DESCRIPTION OF VARIETY

REFERENCES: See Reverse.

ONIONS (ALLIUM CEPA L.)

NAME OF APPLICANT(S)

Asgrow Seed Company

ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)

Kalamazoo, Michigan 49001

FOR OFFICIAL USE ONLY

PVPO NUMBER

7800064

VARIETY NAME OR TEMPORARY DESIGNATION

EXCEL G

Place the appropriate number that describes the varietal character of this variety in the boxes below.

Place a zero in first box (e.g. or) when number is either 99 or less or 9 or less.

1. TYPE:

1 = BULB 2 = BUNCHING 1 = SHORT DAY 2 = LONG DAY

TO DEGREES MEAN LATITUDE - ADAPTATION RANGE

Maturity (days): 1 = EARLY (75 - 90) 2 = MEDIUM (100 - 120) 3 = LATE (> 130)

2. PLANT

CM. HEIGHT ABOVE SOIL LINE TO HIGHEST POINT OF ANY FOLIAGE

CM. TALLER THAN Excel (Comparable variety)

CM. SHORTER THAN _____ (Comparable variety)

1 = ERECT (Spartan Gem) 2 = INTERMEDIATE 3 = FLOPPY (Epoch)

3. LEAF:

CM. LONG (before maturity yellowing begins)

MM. WIDE MM. THICK AT MIDLENGTH OF LONGEST LEAF

Color: 1 = LIGHT GREEN (Early Grano) 2 = MEDIUM GREEN (Yellow Bermuda)
3 = BLUE GREEN (Australian Brown U.C. No. 1)

Bloom: 1 = NONE - glossy 2 = LIGHT (Early Grano) 3 = MEDIUM (Crystal Wax) 4 = HEAVY (California Early Red)

4. SHEATH:

MM. COLUMN LENGTH (Height from soil line to base of lowest succulent leaf) MM. DIAMETER AT MIDLENGTH

Scape: CM. FROM SOIL LINE TO BASE OF INFLORESCENCE

Scape: MM. DIAMETER AT MIDLENGTH

5. INFLORESCENCE:

Umbel (for seed production)

MAXIMUM NO. PER PLANT MINIMUM NO. PER PLANT AVERAGE NO. PER PLANT

MM. DIAMETER 1. COMPACT 2 = LOOSE/OPEN 3 = SHAGGY

Spathe: 1 = LONG BEAK 2 = SHORT BEAK Flower Color: 1 = WHITE 2 = GREEN 3 = BRIGHT GREEN

MM. ANTHOR LENGTH

Anthor Color: 1 = LIGHT GREEN 2 = DARK GREEN 3 = YELLOW 4 = PALE YELLOW 5 = CHOCOLATE 6 = RED

Pollen Viability: 1 = STERILE 2 = FERTILE Sepal Shape: 1 = LONG POINTED 2 = ROUND SHORT

7800064

6. BULB:

 AVERAGE NUMBER BULBS PER METER

 Size (Harvest): 1 = SMALL (Red Creole) 2 = MEDIUM (Australian Brown U.C. No. 1) 3 = LARGE (Early Grano)

 Shape (see attached chart): 1 = GLOBE (White Sweet Spanish) 2 = DEEP GLOBE (Abundance)
 3 = FLT. GLOBE (Australian Brn. U.C. No. 1) 4 = TOP SHAPE (Texas Grano 502)
 5 = DEEP FLAT (Granex) 6 = THICK FLAT (Ebenezer)
 7 = FLAT (Crystal Wax) 8 = TORPEDO-LONG OVAL (Italian Red)

 CM. HEIGHT ÷ CM. DIAMETER = 0.62 SHAPE INDEX

 1 = INVAGINATE 2 = EVAGINATE

 Color (Skin): 01 = BROWN (Australian Brn. U.C. No. 1) 02 = PURPLISH RED (Italian Red)
 03 = BUFF RED (Red Creole) 04 = PINKISH YELLOW (Ebenezer)
 05 = BROWNISH YELLOW (Mt. Danvers) 06 = DEEP YELLOW (Brigham Yellow Globe)
 07 = MEDIUM YELLOW (Early Yellow Globe) 08 = PALE YELLOW (Yellow Bermuda)
 09 = WHITE (White Sweet Spanish) 10 = OTHER (Specify) _____

 Color (Interior): 1 = PINK 2 = RED 3 = PURPLISH-RED 4 = WHITE
 5 = CREAM 6 = LIGHT GREEN-YELLOW 7 = DARK GREEN-YELLOW

 Scales: 1 = FEW (Crystal Wax) 2 = MEDIUM (Australian Brown U.C. No. 1) 3 = MANY (Sweet Spanish)

 Scales: 1 = THICK (Australian Brown U.C. No. 1) 2 = MEDIUM (Red Creole) 3 = THIN (Crystal Wax)

 Scale Retention: 1 = VERY GOOD (Australian Brn. U.C. No. 1) 2 = GOOD (Ebenezer)
 3 = FAIR (Red Wethersfield) 4 = POOR (Crystal Wax)

 Pugence: 1 = MILD (Early Grano) 2 = MEDIUM (Crystal Wax) 3 = STRONG (White Creole)

 Storage: 1 = GOOD (Ebenezer) 2 = FAIR (Yellow Globe Danvers) 3 = POOR (Crystal Wax)

7. DISEASE RESISTANCE (0 = Not Tested; 1 = Susceptible; 2 = Resistant)

 BLACK MOLD NECK ROT PURPLE BLOTCH SMUT
 MILDEW PINK ROOT SMUDGE YELLOW DWARF

8. INSECT RESISTANCE (0 = Not Tested; 1 = Susceptible; 2 = Resistant)

 THRIP OTHER (Specify) _____

9. INDICATE A VARIETY THAT MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Leaf Height	Excel	Flower Ball	Stockton Early Yellow
Leaf Color	Stockton Early Yellow	Bulb Color	Excel
Leaf Bloom/Wax	Stockton G-36	Bulb Size	Excel
Flower Stalk	Stockton Early Yellow	Bulb Shape	Excel
Maturity at Same Location			

REFERENCES

- Jones, H. A. and Mann, L. K. 1963 - Onions and Their Allies, Interscience Publishers, Inc., New York
- USDA Misc. Pub. No. 435, 1941 - Descriptions of Types of Principal American Varieties of Onions
- Hayward, H. E., 1938 - The Structure of Economic Plants, McMillan, New York (Reprint 1967)
- Ag Research, 7 (8):8 - Feb. 1959 - Branding Onion Outcasts
- Salem, I. A. 1966 - Inheritance of Onion Bulb Shape, Iowa St. University - PhD thesis